

In the Claims:

Please amend the claims of this application so as to read as follows:

1. (Currently Amended) A workpiece transport apparatus comprising:
 - at least one pair of transport stages, each transport stage of each said pair of transport stages being disposed so as to face one another in a horizontally opposing manner to the other transport stage of said pair of transport stages in at least one vertical direction and employing including fluidic expulsion means or and/or simultaneously operable fluidic simultaneous expulsion means and fluidic suction means for lifting and transporting to lift in floating fashion and transport one or more workpieces in a floating fashion therebetween;
 - at least one plurality of elevator pins capable of being raised and lowered; disposed on at least one ~~member~~ transport stage of each of the at least one pair of transport stages and such that when raised said elevator pins are adapted to surround a retaining at least one periphery of at least one of the workpiece or workpieces, and to retain the at least one workpiece in a floating fashion between said pair of opposing transport stages by allowing a tip portion of each of said raised elevator pins to contact with or mate with the transport stage opposite to the transport stage from which said at least one plurality of elevator pins are raised; and

~~one or more~~ at least one rotating ~~mechanisms~~ mechanism for rotating the transport stages of each of said at least one pair of transport stages so as to permit ~~cause the individual transport stages of each of said pairs of transport stages same to be inverted vertically relative to one another;~~ wherein ~~the~~ whereby each of said at least one pair of transport stages may transfer at least one workpiece is peripherally retained by at least one plurality of said elevator pins raised from a lower one of said pair of transport stages facing an upper one of said pair of transport stages onto the upper one of said pair of transport stages facing said lower transport stage transferred from at least one upper member of the at least one pair of transport stages to at least one lower member thereof by using the rotating mechanism associated with said pair of transport stages to invert said pair of transport stages in accompaniment to with lowering of the respective the elevator pins retaining said at least one workpiece following said inversion of said pair of transport stages at the at least one upper member of the at least one pair of transport stages when the at least one upper member of the at least one pair of transfer stages is inverted vertically by at least one of the rotating mechanism or mechanisms.

2. (Currently Amended) A workpiece transport apparatus comprising:

~~at least one a plurality of transport stages disposed in horizontally~~
~~opposing pairs, each pair of transport stages defining a gap~~
~~therebetween such that the transport stages of said pair~~
~~flank opposite one another in at least one a transport path~~
~~of direction in which one or more workpieces is or are~~
~~transported and employing, each said transport stage~~
~~including fluidic expulsion means and/or or~~
~~simultaneously operable fluidic expulsion means and~~
~~fluidic suction means for lifting and transporting said one~~
~~or more workpieces to lift in floating fashion and transport~~
~~at least one of the workpiece or workpieces;~~

at least one plurality of elevator pins capable of being raised and
lowered; disposed on at least a portion of the ~~each of said~~
~~respective transport stages, and retaining at least one such~~
~~that when raised said elevator pins are adapted to~~
~~surround a periphery of at least one of the workpiece or~~
~~workpieces and to retain the at least one workpiece in a~~
~~floating fashion between said pair of opposing transport~~
~~stages by allowing a tip portion of each of said elevator pins~~
~~to contact with or mate with the transport stage opposite to~~
~~the transport stage from which the at least one plurality of~~
~~elevator pins are raised;~~

~~one or more at least one first rotating mechanisms mechanism~~ for rotating at least one of the transport stage or stages of at least a selected one of said opposing transport stage pairs associated with said ~~which is~~ are upstream in at least one workpiece transport direction or directions path from its position flanking said workpiece transport path to a at least one tilt angle to that workpiece transport path of less than 180° in at least one direction tending to cause same to be inverted vertically; and

~~one or more at least one second rotating mechanisms mechanism~~ for rotating at least one of the transport stage or stages stage pair which is immediately or are downstream of said selected transport stage pair in at least one of the said workpiece transport direction or directions path to at least a one tilt angle that causes the causing same space between the transport stages of said selected transport stage pair and the spaces between the transport stage pair immediately downstream therefrom to face each other; across at least one of the workpiece transport direction or directions, the at least one transport stage which is upstream in the at least one workpiece transport direction and which is rotated by at least one of the first rotating mechanism or mechanisms;

wherein at least one of the respective ~~the~~ elevator pins located at the downstream end of the selected transport stage pair and the elevator pins located at the upstream end of the transport stage pairs immediately downstream from the selected transport stage pair which is at at least one location corresponding to the downstream side in at least one workpiece direction of the at least one transport stage that is upstream in the at least one workpiece transport direction, at least one of the respective elevator pins which is at at least one location corresponding to the upstream side in the at least one workpiece transport direction of of the at least one transport stage that is downstream in the at least one workpiece transport direction, are controlled so as to engage in elevator-type action separately from one or more others of the respective pluralities of elevator pins; and

~~whereby the at least one workpiece retained between the selected transport stage pair will is made to glide substantially~~ under the force of its own weight so as to be transferred from ~~between the selected at least one transport stage pair that is upstream in the at least one workpiece transport direction to between the at least one transport stage pair immediately downstream therefrom when the elevator pins at the downstream end of the selected transport stage pair and the elevator pins of the transport stage pair immediately downstream from the selected transport stage pair are retracted that is downstream in the at least one workpiece transport direction in accompaniment to~~

~~lowering of at least one elevator pin at the downstream side in the at least one workpiece transport direction of the at least one transport stage that is upstream in the at least one workpiece transport direction when the at least one transport stage that is upstream in the at least one workpiece transport direction is rotated in the at least one workpiece transport direction tending to cause same to be inverted vertically by the at least one first rotating mechanism and lowering of at least one elevator pin at the upstream side in the at least one workpiece transport direction of the at least one transport stage that is downstream in the at least one workpiece transport direction when the at least one transport stage that is downstream in the at least one workpiece transport direction is rotated by the at least one second rotating mechanism.~~

3. (Currently Amended) A workpiece transport apparatus according to claim 1 or claim 2 wherein:

at least a portion of ~~each the~~ respective elevator pins ~~pin of~~
~~each plurality of elevator pins~~ is or are at least partially coated with vibration-damping material and/or cushioning material having rubber, resin, and/or gel-like silicone as a primary component.

4. (Currently Amended) A workpiece transport apparatus comprising:

at least one pair of transport stages, ~~each said pair of transport stages including an upper member and a lower member respectively disposed in a horizontally opposing manner to each other so as to face one another in at least one vertical direction, and employing respectively including fluidic expulsion and/or simultaneous fluidic expulsion means and fluidic suction means for lifting, maintaining and transporting to lift in floating fashion and transport one or more workpieces in a floating fashion therebetween or alternatively holding one or more workpieces disposed therebetween to said upper or to said lower member; and~~
~~one or more at least one rotating mechanisms mechanism associated with said for rotating the~~ at least one pair of transport stages ~~for rotating the same so as to invert the disposition of said upper and lower members thereof so as to permit same to be inverted vertically while such that at least one of the workpiece or workpieces disposed therebetween is held by fluidic suction to said upper or to said lower member thereof at least one member of the at least one pair of transport stages; and~~

wherein the at least one workpiece associated with an inverted pair of transport stages is transferred from the at least one of said upper or lower members to which it was held during rotation to the opposing member of that pair of transport stages member of the at least one pair of transport stages to at least one lower member thereof in accompaniment to with the reduction, termination, and/or reversal of the fluidic suction holding the same at the at least one upper member of the at least one pair of transport stages when the at least one upper member of the at least one pair of transport stages is inverted vertically by at least one of the rotating mechanism or mechanisms.

5. (Currently Amended) A workpiece transport apparatus according to any one of claims 1, 2, and or 4 wherein:
at least a portion of each of the at least one pair of the respective transport stages is or are supported so as to permit horizontal or vertical movement.
6. (Currently Amended) A workpiece transport apparatus according to claim 3 2 wherein:
at least a portion of each of the at least one pair of the respective transport stages is or are supported so as to permit horizontal and vertical movement.